

CATALOG INFORMATION

Dept and Nbr: NRM 72

Title: FIRE CNTROL/ITS USE

Full Title: Forest Fire Control and Its Use

Last Reviewed: 1/25/2021

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	3.00	Lecture Scheduled	3.00	17.5	Lecture Scheduled	52.50
Minimum	3.00	Lab Scheduled	0	6	Lab Scheduled	0
		Contact DHR	0		Contact DHR	0
		Contact Total	3.00		Contact Total	52.50
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 105.00

Total Student Learning Hours: 157.50

Title 5 Category: AA Degree Applicable

Grading: Grade or P/NP

Repeatability: 00 - Two Repeats if Grade was D, F, NC, or NP

Also Listed As:

Formerly: FOR 72

**Catalog Description:**  
Principles of fire behavior, control and prevention for natural resource managers and first responders. Also covers the prescribed use of fire in natural resource management applications (fuel reduction, invasive species control, etc).

**Prerequisites/Corequisites:**

**Recommended Preparation:**  
Eligibility for ENGL 100 or ESL 100

**Limits on Enrollment:**

**Schedule of Classes Information:**  
Description: Principles of fire behavior, control and prevention for natural resource managers and first responders. Also covers the prescribed use of fire in natural resource management applications (fuel reduction, invasive species control, etc). (Grade or P/NP)  
Prerequisites/Corequisites:  
Recommended: Eligibility for ENGL 100 or ESL 100  
Limits on Enrollment:

Transfer Credit: CSU;  
Repeatability: Two Repeats if Grade was D, F, NC, or NP

## **ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:**

<b>AS Degree:</b>	<b>Area</b>	Effective:	Inactive:
<b>CSU GE:</b>	<b>Transfer Area</b>	Effective:	Inactive:
<b>IGETC:</b>	<b>Transfer Area</b>	Effective:	Inactive:
<b>CSU Transfer:</b>	Transferable	Effective: Fall 1981	Inactive:
<b>UC Transfer:</b>		Effective:	Inactive:

### **CID:**

### **Certificate/Major Applicable:**

Both Certificate and Major Applicable

## **COURSE CONTENT**

### **Student Learning Outcomes:**

At the conclusion of this course, the student should be able to:

1. Summarize the factors that influence fire behavior.
2. Distinguish among wildland fire behaviors as they relate to environmental factors.
3. Propose ways to use fire in silviculture practices to improve forest and range lands.

### **Objectives:**

Upon successful completion of this course, students will be able to:

1. Compare alternative fire fighting actions and their influences on fire behavior.
2. Implement fire standards for firefighter safety.
3. Evaluate the I.C.S (Incident Command System) organizational structure and chain of command in emergency situations and explain their role in the overall context of wildland fire suppression.
4. Differentiate among types of firefighting equipment and determine when each should be used.
5. Compare and contrast the different methods of attacking a forest fire.
6. Apply the ten standard fire-fighting rules.
7. Describe the use of hand tools, chain saws, and other firefighting equipment and outline standard procedures for operating around bulldozers, helicopters, and fixed wing aircraft.
8. Describe the safe use of chain saws and related equipment as it concerns felling, limbing, and bucking operations.
9. Identify the basic components of power saws and troubleshoot to determine malfunctions.

### **Topics and Scope:**

- I. Introduction
  - A. History of wildland fire technology/suppression
  - B. Fire terminology
  - C. Wildland firefighting agencies
- II. Fire Physics

- A. Fire behavior
- B. Fuels
- C. Weather
  - 1. basic principles
  - 2. temperature
  - 3. atmospheric moisture
  - 4. atmospheric stability
  - 5. wind
  - 6. thunderstorms
- D. Topography
- III. Fire Suppression and Firefighter Safety
  - A. Fire line safety and fire shelters
  - B. Fire standards
  - C. Fire line construction and safety
  - D. Mop-up techniques and safety
- IV. Fire Tools
  - A. Tools and apparatus
    - 1. tool safety
    - 2. maintenance
  - B. Chain saws and crosscut saws
    - 1. safety
    - 2. operation
    - 3. techniques
      - a. felling
      - b. limbing
      - c. bucking
    - 4. maintenance and troubleshooting
- V. Air Operations
  - A. Helicopter procedures and safety
  - B. Fixed wing aircraft procedures and safety
- VI. Regulations
  - A. I.C.S. (Incident Command System)
  - B. Chain of command
  - C. Sexual harassment
- VII. Field Skills
  - A. Field conduct
  - B. Woodsmanship
  - C. Field performance
  - D. Line construction
  - E. Power saws
- VIII. Fire Use
  - A. Silviculture practices
  - B. Improving forest and range lands
  - C. Native American use of fire for land management

### **Assignment:**

Representative assignments:

- 1. Readings in assigned text(s) 15 - 20 pages per week.
- 2. Homework, including definitions, short answer, fill-ins.
- 3. Given fire scenarios, determine first response scenario, with written explanation.
- 4. Term paper of 5-8 pages on a topic such as organization of federal or state wildland

firefighting agencies; history of fire suppression; Native American use of fire; review of a major fire.

5. Oral presentation based on the term paper.

6. Midterm; final exam.

### Methods of Evaluation/Basis of Grade:

**Writing:** Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

Term paper

Writing  
20 - 30%

**Problem Solving:** Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Homework problems

Problem solving  
10 - 20%

**Skill Demonstrations:** All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

None

Skill Demonstrations  
0 - 0%

**Exams:** All forms of formal testing, other than skill performance exams.

Quizzes, midterm, final exam: Multiple choice, completion, short answer

Exams  
40 - 60%

**Other:** Includes any assessment tools that do not logically fit into the above categories.

Attendance, participation, Oral presentation

Other Category  
5 - 15%

### Representative Textbooks and Materials:

Firefighter's Handbook on Wildland Firefighting: Strategy, Tactics and Safety. Teie, William C. Deer Valley Press, 4th Ed., 2006.

Wildland Firefighting: Fire Behavior, Tactics & Command. Perry, Donald G. Fire Publications, Inc., 1990 (classic).

Prescribed Burning in California Wildlands Vegetation Management. Biswell, Harold H. University of California Press: 1999 (classic).

(Textbooks are classics in the field.)